SIEMENS

SIOS

SP

Start-Up Protocol

Siemens Integrated OR System **55 37 027**

SIOS Serial Number:_____

Customer :_____

Location :_____

Country_____

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English

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Document Status

The document corresponds to the status current at the time of device delivery.

The paper copy is an uncontrolled document.

Up-to-date documentation can be ordered from your local Siemens office.

Exclusion of Liability

Installation and Service of the device described herein must be performed by qualfied personnel employed or authorized by Siemens or one of its affiliated companies.

Installation technicians and other personnel not employed by Siemens or the technical service department of one of its affiliated companies are directed to contact the local Siemens office or that of the affiliated company prior to performing any installation or service activities.

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General Information

One protocol is issued for each SIOS. The serial number, customer name, country, and installation location are entered on the cover sheet. The protocol is signed by the technician performing the start-up and stored in the system binder. Send a copy to:

Siemens Medical Soloutions
GG SP Logistics SPL 1
91052 Erlangen
Henkestr. 127
Germany

Orientation and Completion Information

The protocol steps are presented in the same manner as the work steps in the Start-Up Instructions.

- Once a work step has been performed and completed without problems, mark the required field with a checkmark.
- Non-applicable questions should be marked "n.a."
- Enter the measured values in the fields provided.

Example 1: All steps have been performed without problems.

- "o.k." field marked with a check mark.
- Remarks = n.a.
- Value: Enter the measured value and unit

Chapter 4 **Installation Inspection**		
Room and System Configuration		**o.k.** ✓
Remarks: **n.a.**		
Hardware - Configuration		**o.k.** ✓
Remarks: **n.a.**		
Protective Conductor Measurement	**Value**	
Sliding shelf in upper section of electronics cabinet	**0.1 Ohm**	**o.k.** ✓
Remarks: **n.a.**		

Tab. 1 Protocol completion instructions

Deviations from the planned procedure are noted in the Remarks field. Provide a brief description of reasons. Any additional information required should be entered under "Comments".

- Enter an "X" in the o.k. field if the work could not be completed. At the end of the protocol, enter the anticipated schedule for subsequent work.
- If the step could be completed with additional work, mark the "X" with a circle. Enter the type and scope of this additional work under "Comments".

Example 2: The work could not be performed as planned or could not be completed

.

Chapter 4 **Installation Inspection**	
Room and System Configuration	**o.k.** X
Remarks: Missing or incorrect information, material, version e.g., no list available regarding configurations	
Hardware - Configuration	**o.k.** ⊗
Remarks: Customer request: 2nd and 3rd image monitors should be on support arm 2. However, the 2nd image monitor is installed on support arm 1 (refer to Comments).	

Tab. 2 Protocol completion instructions

All entries are made manually. The technician performing the work enters his name, date, and initials at the bottom of each page.

Name	Date	Initials

Preliminary Clarification

Comparison of the installation and room with the planned configuration of the SIOS basic equipment and all options.

Chapter 4 **Preliminary Clarification**		
Modem telephone number	**Value**	**o.k.**
Telephone connection including country code:		
Remarks:		
Telephone system data		**o.k.**
Remarks:		
"Telephone Menu" configuration (list: name / number / sequence)		**o.k.**
Remarks:		
Pager system data		**o.k.**
Remarks:		
"Pager Menu" configuration (list: name / number / sequence)		**o.k.**
Remarks:		
External fixed network telephone		**o.k.**
Remarks:		
Internal pager		**o.k.**
Remarks:		
Availability of OR table	**Value**	**o.k.**
Manufacturer / IR code:		
Remarks:		

Name	Date	Initials

Chapter 4 **Preliminary Clarification**	
LC cables for control panel / circuit diagram entry	**o.k.**
Remarks:	
OR and room lighting function test for "stand alone" mode	**o.k.**
Remarks:	
Availability of IP devices	**o.k.**
Remarks:	
IP devices previously run in "stand alone" mode	**o.k.**
Remarks:	

Name	Date	Initials

Installation Inspection

Chapter 4 **Installation Inspection**	
Room and system configuration **available in writing**	**o.k.**
Remarks:	
Visual inspection of hardware configuration conforms to purchase order	**o.k.**
Remarks:	
Installation protocol ser. no. list complete	**o.k.**
Remarks:	
System cabling complete and connected	**o.k.**
Remarks:	
Installation protocol fully completed	**o.k.**
Remarks:	
Prerequisites for initial start-up are met	**o.k.**
Remarks:	
Gas test performed (or scheduled during start-up)	**o.k.**
Remarks:	
Inspection of insulated parts installation	**o.k.**
Remarks:	
Label, maintenance items, and supply cables for all components	**o.k.**
Remarks:	

Name	Date	Initials

Preliminary Steps for Initial Start-Up

Chapter 4 **Preliminary Steps for Initial Start-Up**		
Onsite power supply	**Value**	
		o.k.
Remarks:		
Switch on SIOS PC in back		**o.k.**
Switch on image mixer and video splitter		**o.k.**
Switch on modem		**o.k.**
Check DIP switch at back of video recorder (1-4=off / 5+6 =on)		**o.k.**
Video in/out - Splitter & Receiver on / Sync. DIP switch = on		**o.k.**
Switch on connector strip in cabinet and device box		**o.k.**
Switch on SIOS monitors		**o.k.**
Release the emergency STOP at the 15" grip module		**o.k.**
Switch off the video printer and video recorder		**o.k.**
Switch off all IP devices		**o.k.**
Release the Emergency OFF at the on/off module		**o.k.**
Activate electronics cabinet fuse F1 at the PSU		**o.k.**
Remarks:		

Name	Date	Initials

Initial Start-Up

Chapter 4 **Perform Initial Start-Up**	
SIOS ON **/** Standard WINDOWS – start-up	**o.k.**
Remarks:	
VGA cable for PC monitor	**o.k.**
Remarks:	
Power supply, monitors, electronics cabinet	**o.k.**
Remarks:	
PC start-up	**o.k.**
Remarks:	
Audio cables for intercom	**o.k.**
Remarks:	
Information / error messages at the menu monitor	**o.k.**
Remarks:	
15" TFT monitor settings	**o.k.**
Remarks:	
Cables for room light, HBT, and CAN BUS	**o.k.**
Remarks:	
Audio path via separation module	**o.k.**
Remarks:	

Name	Date	Initials

Chapter 4 **Perform Initial Start-Up**	
Infrared booster cable	**o.k.**
Remarks:	
Emergency stop circuit	**o.k.**
Remarks:	
RS232 recorder; 18" TFT monitor path	**o.k.**
Remarks:	
Video mixer	**o.k.**
Remarks:	
Printer path	**o.k.**
Remarks:	
PTU circuit	**o.k.**
Remarks:	
Shutdown circuit	**o.k.**
Remarks:	
CAN path and power supply in the device box	**o.k.**
Remarks:	
Video cable from device box to video mixer	**o.k.**
Remarks:	
Emergency OFF circuit	**o.k.**
Remarks:	

Name	Date	Initials

Concluding Steps for Installation

Chapter 4 **Concluding Steps for Installation**	
All covers have been installed	**o.k.**
Remarks:	
Electronics cabinet in final position	**o.k.**
Remarks:	
Second SIOS start-up	**o.k.**
Remarks:	
Rotation and upward/downward movement of support arm, MTS, and monitors	**o.k.**
Remarks:	
Ease of movement, end stops, and stopping points for monitor support	**o.k.**
Remarks:	
Park and work positions of device box	**o.k.**
Remarks:	
Ease of movement, end stops, and stopping points for device box	**o.k.**
Remarks:	
Function of all components during and after movement	**o.k.**
Remarks:	
System cleanliness	**o.k.**
Remarks:	

Name	Date	Initials

Chapter 4 **Protective Conductor Measurement**		
Sliding shelf in upper section of electronics cabinet	**Value**	
		o.k.
Outer cover of electronics cabinet and doors of lower section	**Value**	
		o.k.
Outer covers of device box and adjustable shelves of surgical devices	**Value**	
		o.k.
Support arm cover screws up to 2 m above the floor	**Value**	
		o.k.
MTS cover screws and monitor housing	**Value**	
		o.k.
Installation protocol signed / copies made		**o.k.**
Remarks:		

Name	Date	Initials

Hardware Configuration Status

Chapter 5 **Status**		
Software version: Date of installation:	**Value**	**o.k.**
Remarks:		
WINDOWS start-up without errors		**o.k.**
Remarks:		
Operating menus - RS232 components		**o.k.**
Remarks:		
Operating menus - CAN components		**o.k.**
Remarks:		
Image monitor - default position of image endocamera		**o.k.**
Remarks:		
Video image / video mixer		**o.k.**
Remarks:		
Video recorder		**o.k.**
Remarks:		
Basic settings for video printer (optional)		**o.k.**
Remarks:		

Name	Date	Initials

Software Configuration Status

Chapter 5 **Software Configuration**	
Configuration login with password 1	**o.k.**
Remarks:	
OR and room lighting function test for "stand alone" mode	**o.k.**
Remarks:	
Availability of IP devices	**o.k.**
Remarks:	
IP devices previously operated in "stand alone" mode	**o.k.**
Remarks:	

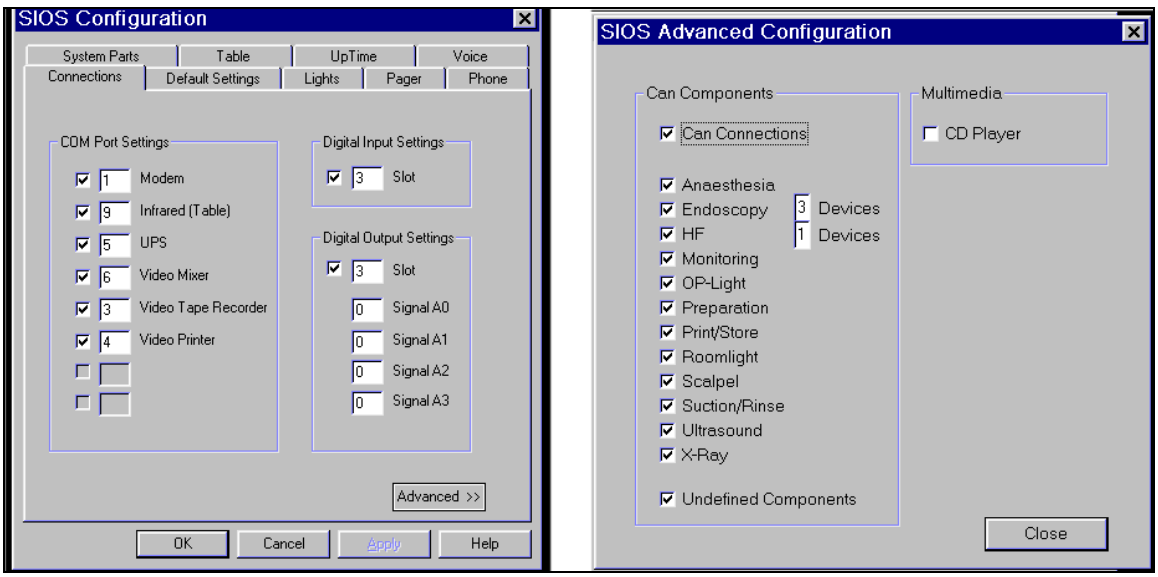

Fig. 1 Config Status

(note deviations directly in the graphic)

Default Connections & Advanced Configuration as shown in Fig. 1.	**o.k.**

Name	Date	Initials

Software Default Configuration

Chapter 5 **Software Configuration**	
Loudspeaker volume	**o.k.**
Remarks:	
Default Settings	**o.k.**
Remarks:	
Deactivate ClearKey	**o.k.**
Remarks:	
Sequence: SIOS restart via "End" menu, restart SIOS	**o.k.**
Remarks:	
Keyboard configuration	**o.k.**
Remarks:	
SIOS "Stop Application"	**o.k.**
Remarks:	
User language configuration	**o.k.**
Remarks:	
SIOS "Start Application"	**o.k.**
Remarks:	
Apply keyboard and user language	**o.k.**
Remarks:	

Name	Date	Initials

Telephone Configuration

Chapter 5 **Software Configuration**		
Phone service enabled		**o.k.**
Remarks:		
Allow incoming calls		**o.k.**
Remarks:		
Rings before auto-answer	**Value:**	**o.k.**
Remarks:		
Phone parameters	**Value**	**o.k.**
Name 1:	**Number**	
Name 2:	**Number**	
Name 3:	**Number**	
Name 4:	**Number**	
Name 5:	**Number**	
Name 6:	**Number**	
Name 7:	**Number**	
Name 8:	**Number**	
Name 9:	**Number**	
Name 10:	**Number**	
Name 20:	**Number**	
Remarks:		

Name	Date	Initials

Pager Configuration

Chapter 5 **Software Configuration**		
Pager service enabled		**o.k.**
Remarks:		
Pager system	**Value:**	**o.k.**
Remarks:		
Access number	**Value:**	**o.k.**
Remarks:		
Pager parameters	**Value**	**o.k.**
Name 1:	**Number**	
Name 2:	**Number**	
Name 3:	**Number**	
Name 4:	**Number**	
Name 5:	**Number**	
Name 6:	**Number**	
Name 7:	**Number**	
Name 8:	**Number**	
Name 9:	**Number**	
Name 10:	**Number**	
Remarks:		

Name	Date	Initials

Voice Control Configuration

Chapter 5 **Software Configuration**	
Enable voice control	**o.k.**
Remarks:	

OR Table(s) Configuration

Stationary table		**Value**	**o.k.**
Type	**IR code:**		
Remarks:			
Mobile tables		**Value**	**o.k.**
Type	**IR code:**		
Type	**Number**		
Type	**Number**		
Type	**Number**		
Type	**Number**		
Remarks:			

Name	Date	Initials

Room Lighting Configuration

Chapter 5 **Software Configuration**	
Roomlight "main light" ON/OFF	**o.k.**
Roomlight - main light & dimmer	**o.k.**
Remarks:	
Roomlight "side light" 1 ON/OFF	**o.k.**
Roomlight "side light" 2 ON/OFF	**o.k.**
Remarks:	

OR Lights Configuration

Chapter 5 **Software Configuration**	
"OR lights" ON/OFF	**o.k.**
"OR lights" & dimmer	**o.k.**
Remarks:	
Satellite ON/OFF	**o.k.**
Remarks:	
Restart SIOS via End menu	**o.k.**
Remarks:	

Name	Date	Initials

Light Control Configuration (Hardware)

Chapter 5 **Roomlight (Hardware) Configuration**	
Main light switches with correct menu	**o.k.**
Brightness control for main light	**o.k.**
Remarks:	
Side light 1 switches with correct menu	**o.k.**
Side light 2 switches with correct menu	**o.k.**
Remarks:	

Chapter 5 **OR Lights (Hardware) Configuration**	
Main light switches with correct menu	**o.k.**
Brightness control for main lights is active	**o.k.**
Remarks:	
Satellite switches	**o.k.**
Remarks:	

Chapter 5 **Light Control (Hardware) Configuration**	
Entry in circuit diagram for system binder	**o.k.**
Remarks:	

Name	Date	Initials

Menu Functions with HBT

Chapter 5 **Checking the Operating Menus**		
Information menu complete	**Value:**	**o.k.**
Menu Language: (De / En ?)		**o.k.**
Remarks:		
Hand input device function		**o.k.**
Remarks:		

Chapter 5 **Video mixer**	
Operation of all menu items	**o.k.**
Remarks:	
Display at image monitors	**o.k.**
Remarks:	

Chapter 5 **Endo light**	
Operation of all menu items	**o.k.**
Remarks:	
Reaction at lighting device	**o.k.**
Remarks:	

Name	Date	Initials

Chapter 5 **Endocamera**	
Operation of all menu items	**o.k.**
Remarks:	
Reaction at camera	**o.k.**
Remarks:	

Chapter 5 **RF device**	
Operation of all menu items	**o.k.**
Remarks:	
Reaction at RF device	**o.k.**
Remarks:	

Chapter 5 **OR Table(s)**	
Operation of all menu items	**o.k.**
Remarks:	
OR table movements (stationary table)	**o.k.**
Remarks:	
OR table movements (mobile tables)	**o.k.**
Remarks:	

Name	Date	Initials

Chapter 5 **X-ray C-arm system**	
Operation of all menu items	**o.k.**
Remarks:	
Reaction at X-ray device	**o.k.**
Remarks:	
Display at image monitors	**o.k.**
Remarks:	

Chapter 5 **Ultrasound System**	
Operation of all menu items	**o.k.**
Remarks:	
Reaction at US system	**o.k.**
Remarks:	
Display at image monitors	**o.k.**
Remarks:	

Name	Date	Initials

Chapter 5 **Video Recorder**	
Operation of all menu items	**o.k.**
Remarks:	
Display at control monitor (status line)	**o.k.**
Remarks:	
Display at image monitors	**o.k.**
Remarks:	
Alternative test for endocamera	**o.k.**
Remarks:	

Chapter 5 **Video Printer**	
Operation of print function with HBT	**o.k.**
Remarks:	
Reaction at printer	**o.k.**
Remarks:	
Display at menu monitor (information line)	**o.k.**
Remarks:	

Name	Date	Initials

Menu Functions with Headset

Chapter 5 **Voice Control**	
Switch voice control on / off	**o.k.**
Remarks:	
Menus at control monitor in user language	**o.k.**
Remarks:	
Reaction at the selected component	**o.k.**
Remarks:	
Detection rate approx. 90%	**o.k.**
Remarks:	

Telephone Menu Functions

Chapter 5 **Check telephone menu** (HBT & Voice)	
Test connection from SIOS to internal & external telephone	**o.k.**
Remarks:	
Test connection from external & internal telephone to SIOS	**o.k.**
Remarks:	
Headset functions: microphone and headset	**o.k.**
Remarks:	
Modem Autoanswer (call block & refusal)	**o.k.**
Remarks:	

Name	Date	Initials

Menu Functions Pager

Chapter 5 **Check pager menu** (HBT & Voice)	
Test connection to pager	**o.k.**
Remarks:	
Pager emergency call	**o.k.**
Remarks:	
Pager selection from group	**o.k.**
Remarks:	

Name	Date	Initials

Backup

Chapter 6 **Backup Diskette**	
External drive & diskette	**o.k.**
Remarks:	
Diskette structure	**o.k.**
Remarks:	
Operating menus (ccf) saved	**o.k.**
Remarks:	
Software configuration (registry) saved	**o.k.**
Remarks:	
Speaker data saved	**o.k.**
Remarks:	
Hardware data saved	**o.k.**
Remarks:	
Diskette labeled and stored in the cabinet door	**o.k.**
Remarks:	

Data Security

Chapter 7 **ClearKey**	
SIOS "ClearKey" security window activated	**o.k.**
Remarks:	

Name	Date	Initials

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System Safety

Chapter 8 **Emergency Stop**		
Emergency stop for infrared booster		**o.k.**
Remarks:		
UPS test	**Value:**	**o.k.**
Function time > 80 msec.	_____**min**	
Remarks:		
Emergency OFF		**o.k.**
Remarks:		
Reboot after emergency OFF		**o.k.**
Remarks:		

Name	Date	Initials

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Monitor Display

Chapter 9 **TFT Monitors**	
Basic settings at image monitor(s) without missing pixels	**o.k.**
Remarks:	
Basic settings at menu monitor without missing pixels	**o.k.**
Remarks:	

Name	Date	Initials

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Mechanical Tests

Chapter 10 **Final Test**	
Rotation and upward/downward movement of support arm, MTS, and monitors	**o.k.**
Remarks:	
Ease of movement, end stops, and stopping points	**o.k.**
Remarks:	
No limits to functions during and after movement	**o.k.**
Remarks:	
Paint and cleanliness of entire system	**o.k.**
Remarks:	
Protective conductor measurement (values as shown under 2-8)	**o.k.**
Remarks:	

Name	Date	Initials

Comments

Comments regarding the start-up

Name	Date	Initials

Comments regarding the start-up

Name	Date	Initials

Transfer

This document confirms the system transfer to the responsible Siemens project manager. Start-up has been completed in accordance with the contract; any additional or follow-up work is noted in the "Comments" section (of this protocol). The SIOS system can be started in the form listed in the protocol.

SIOS Serial No. :_____

Customer: _____

Room designation (OR) :_____

Location (city): _____

Country :_____

Date: _____

_____ _____

Name of technician performing start-up Signature

_____ _____

Name of Siemens Project Manager Signature